

97-84176-28

U.S. National Defense
Advisory Commission
Labor speeds defense

[Washington]

[1941]

97-84176-28

MASTER NEGATIVE #

COLUMBIA UNIVERSITY LIBRARIES
PRESERVATION DIVISION

BIBLIOGRAPHIC MICROFORM TARGET

ORIGINAL MATERIAL AS FILMED - EXISTING BIBLIOGRAPHIC RECORD

308	
Z	
Box 640	U. S. Council of national defense. Advisory commission. Labor speeds defense. Report of progress. Labor division, National defense advisory commission. (Washington, U. S. Govt. print. off., 1941, 40 p. Incl. tables. 23".
1. Labor and laboring classes—U. S.—1914-	2. U. S.—Defenses.
1. Title.	
Library of Congress	HD8051.C52 1941 41-50229
	(7) 331.0978

RESTRICTIONS ON USE: Reproductions may not be made without permission from Columbia University Libraries.

TECHNICAL MICROFORM DATA

FILM SIZE: 35mmREDUCTION RATIO: 10:1IMAGE PLACEMENT: IA ☒ IIA IB IIBDATE FILMED: 9-3-97INITIALS: JPTRACKING # : 27371

FILMED BY PRESERVATION RESOURCES, BETHLEHEM, PA.

BIBLIOGRAPHIC IRREGULARITIES

MAIN ENTRY: U.S. National Defense Advisory Commission

Labor speeds defense

Bibliographic Irregularities in the Original Document:

List all volumes and pages affected; include name of institution if filming borrowed text.

Page(s) missing/not available:

Volume(s) missing/not available:

Illegible and/or damaged page(s):

Page(s) or volume(s) misnumbered:

Bound out of sequence:

Page(s) or volume(s) filmed from copy borrowed from:

Other:

between page 26 - 27

X

Inserted material:

TRACKING#: MSH27371

APR 15 1941



308
Z
Box
640

LABOR SPEEDS DEFENSE

REPORT OF PROGRESS

LABOR DIVISION
NATIONAL DEFENSE ADVISORY COMMISSION

LABOR SPEEDS DEFENSE

REPORT OF PROGRESS

LABOR DIVISION
NATIONAL DEFENSE ADVISORY COMMISSION

9/26/48 V. d.

OCT 1 1948 PCR

CONTENTS

	Page
Employer-Employee Relations	5
Employing the Unemployed	10
Labor Supply	11
Mobilizing Our Manpower	11
Schools for Defense Workers	16
"On-the-Job" Training	21
Housing for Defense Workers	26
Picking Sites for New Plants	27
Defense Orders for Small Business	27
Stabilizing Shipbuilding	29
Government Agencies Lend a Hand	30
Labor Policy for Defense	30
Defense Contracts	32
Our National Morale	33
Appendix	35

LABOR SPEEDS DEFENSE

In the great drive to make this country the "arsenal of democracy," the American workman is performing an especially crucial role. Behind the rumble of the Army's new tanks, the slide of the Navy's new battleships down the ways, the drone of the new big bombers sweeping across the sky, stand the skills, the energies, the patriotism of American labor, fusing many minds, many hands, many talents to insure the success of the national defense program.

In this momentous undertaking the Labor Division of the National Defense Advisory Commission was charged with the responsibility for keeping a steady flow of manpower moving through the gates—when and where it was needed—to turn the wheels of defense industry.

And, throughout this program, the Labor Division has held to the belief that the means used must always be identical with the end in view—to preserve and to strengthen the democratic way of life. For freedom cannot be bought by arms alone. Its price is also measured in terms of human welfare.

EMPLOYER-EMPLOYEE RELATIONS

Primary among the problems facing the Labor Division, when it was established as part of the National Advisory Defense Commission on May 28, 1940, was that of helping to insure uninterrupted production of defense materials in mine and factory and their rapid and regular distribution by truck, ship, train, and plane.

In moving toward this goal the Labor Division appointed a Labor Policy Advisory Committee to draw up a program to enlist labor's most effective and efficient participation in meeting the demands of defense. This committee composed of 16 labor representatives from the A. F.

of L., the C. I. O., and the Railroad Brotherhoods, consists of the following:

Harry C. Bates, president, Bricklayers, Masons and Plasterers International Union of America.

Van A. Bittner, United Mine Workers of America.

H. W. Brown, international president, International Association of Machinists.

John P. Coyne, president, Building and Construction, Trades Department, American Federation of Labor.

S. H. Dalrymple, president, United Rubber Workers, Akron.

Cinton Golden, regional director, Northeastern Region, Steel Workers Organizing Committee, Pittsburgh.

Allen S. Haywood, director of organization, Congress of Industrial Organizations, New York.

Samuel J. Hogan, president, National Marine Engineers Beneficial Association, Washington.

A. Johnston, grand chief engineer, Brotherhood of Locomotive Engineers.

George Q. Lynch, general president, Pattern Makers League of North America.

A. E. Lyon, grand president, Brotherhood of Railroad Signalmen of America, Chicago.

Charles J. MacGowan, vice-president, International Brotherhood of Boiler Makers, Iron Shipbuilders, Welders and Helpers of America, Chicago.

George Masterton, general president, United Association of Journeymen, Plumbers and Steamfitters.

Emil Rieve, president, Textile Workers Union of America, New York.

E. J. Thomas, president, United Automobile Workers of America, Detroit.

D. W. Tracy, formerly president International Brotherhood of Electrical Workers, now Second Assistant Secretary of Labor.

Promptly after its formation the committee pledged to

the President of the United States "the full and unstinted" support of organized labor to the National Defense program.

Recently the committee reaffirmed this stand by a statement which read in part:

In this time of world crisis, American labor is awake to the crucial need for a strong national defense program. Labor recognizes fully that if the democratic way of life is to be preserved, and enlarged, our country must prepare itself for total defense—morally and materially. Labor knows that it is the first to be trampled under the march of dictatorship. Labor knows that if workers are to remain free men, and keep their free choices, democracy—as a living faith, as a living reality—must be equipped to meet the threat of totalitarianism, within and without. Labor has been—and is—cooperating wholeheartedly throughout the entire defense effort . . .

Labor again reaffirms its assurance of cooperation with the national defense program and further pledges itself to take no action which may in any way impede production before all conciliation facilities of the Federal Government for resolving any existing controversy have been exhausted.

In carrying out this pledge, the Labor Policy Advisory Committee has had the assistance of Joseph O. Keenan, secretary of the Chicago Federation of Labor (A. F. of L.), and John Owens, president of the Ohio District Council of the United Mine Workers (C. I. O.) and E. D. Bransome, president of the Vanadium Corporation of America. Together they direct the Labor Division's staff of labor relations experts who collaborate with the Conciliation Service of the Labor Department in settling management-labor disputes in defense industries.

For its own part, the Labor Policy Advisory Committee has constantly exerted its influence to avoid discords arising between the A. F. of L. and the C. I. O. In this regard, all members of the Committee have cooperated in a manner which demonstrates that, insofar as the defense program is concerned, labor in this country is united in its devotion to the common cause.

This kind of cooperation is a factor which has contributed to the exceptional harmony in employer-employee

relations which have marked the defense effort to date. Out of some 300 threatened disputes arising since June 1940, in which experts of the Conciliation Service of the Labor Department and of the Labor Division intervened, only a handful resulted in appreciable stoppages. And these were of short duration. Moreover, strike figures compiled by the Bureau of Labor Statistics¹ reveal:

(1) Work stoppages due to strikes in American industry during the year 1940 accounted for an average loss of less than 2 hours per year per worker.

(2) This figure is put in perspective when compared with the time lost through industrial accidents. On-the-job accidents accounted for an average idleness of more than one day per worker, or upward of four times that due to strikes. And the figure for accidents does not include the tremendous loss resulting from more than 11,000 deaths.

(3) There has been a 47 percent decline in the number of man-days idle due to strikes during the first 6 months of the defense program over the corresponding period of 1939.

(4) The number of men involved in strikes was only about half as great during the first 6 months of the defense program as when the United States was actually at war 24 years ago. This is all the more significant when it is realized that total nonagricultural employment is 22 percent larger today.

A detailed study of industrial relations, made by the Bureau of Labor Statistics, in 11 industries² crucial to national defense, disclosed that man-days idle, due to strikes, accounted for less than one-fourth of 1 percent of the total number of man-days worked.

For example: In industries making the engines and machine tools so vital to our national security, there was only 1 day of idleness, resulting from strikes, for each 1,800 man-days of production. In other words, this means that in such industries, strikes in 1940 were responsible for 1 day of idleness for every 6 years of work.

¹ See appendix for tables on strikes.

² See table B, Appendix.

This is a remarkable record. It is all the more remarkable in view of the fact that the period it covers has witnessed a great rise in business activity, a quickening of the entire industrial process, a vast expansion of employment, together with an increase in the stresses and strains which always go with adjustments to new conditions and new personnel—from straw-boss to president, from learner to full-fledged craftsman. American industrial history over the past 100 years shows that any such period is generally marked by an increase rather than a decrease in the number of strikes.

Chief credit for the present downward trend of strikes should go to the patriotism of organized labor and its leaders and to that vast majority of responsible industrialists who have accepted the orderly processes of collective bargaining.

In this respect it is pertinent to observe that this country had to embark upon its last great task of preparedness without the help of collective agreements in the basic mass-production spheres—steel, automobiles, textiles, rubber, glass, shipyards, electrical equipment, public utilities, and others vital to the success of the defense program.

By and large, contracts between employers and representatives of organized labor did not make their appearance on a large scale in these and similar key industries until after 1933.

That these pacts are working toward the permanent establishment of more peaceful and more constructive industrial relations has been underscored recently by the renewal of many management-union agreements on the part of such large manufacturers as Boeing, Briggs, Chrysler, Hudson, Fairchild, Brewster, a group of steel corporations, and by many other concerns.

It cannot be overstressed that this whole result of more amicable employer-employee relations would have been impossible without the statesmanlike stand taken by the sixteen members of the Labor Policy Advisory Committee.

They represent the continuing determination of America's great labor organizations to cooperate fully in guaranteeing the success of the defense program.

It must also be realized that this advance into greater understanding between employers and employed is due in considerable degree to such agencies of Government as the Labor Department's Conciliation Service, which has assisted the Labor Division in the field of industrial relations, as well as to those other agencies which are enforcing such social and labor laws as the National Labor Relations Act, the Fair Labor Standards Act, the Walsh-Healey Act, the Social Security Act, and the Davis-Bacon Act.

EMPLOYING THE UNEMPLOYED

Democracy cannot be effectively defended when millions are unemployed. In seeking to achieve high levels of defense production, we tie one hand behind our backs when we work a tired man long hours while millions of others—fresh, willing—remain in idleness.

Joblessness not only cuts down our capacity to produce. It saps the morale of our people. It undermines faith in the American adventure. It wears dangerously thin great patches of what should be the tough, durable fabric of our society.

Hence, underlying all functions of the Labor Division has been the constant aim of making the defense program result in the fullest possible employment—jobs and jobs and yet more jobs.

During the first 6 months of the defense effort, more than 2,000,000 men and women went back to work. Between June and December 1940 American industry hired new employees at the average rate of 337,000 a month. The December 1940 index of factory employment alone reached the highest point of any month in the preceding 21 years. It has been estimated that, during the year 1941, nearly 4,000,000 additional persons, young, old, middle-aged, will be absorbed from the ranks of the unemployed either to

participate directly in defense endeavors, or in industries whose business volume will grow as more and more purchasing power is released in wages and salaries.

LABOR SUPPLY

With these goals in mind, the Labor Division—in seeking to supply defense industry with a continuous flow of qualified labor—divided its activities into three major parts:

(1) To determine in advance the manpower, classified by skills and experience that would be needed to turn out the guns, tanks, ships and planes ordered by Congress and the President of the United States.

(2) To survey the human resources already available to carry out the national schedule of production, and to catalog them by occupation and location.

(3) To launch the most thorough training program—both “on-the-job,” and in the vocational schools—ever attempted in American annals; and, under this program, to refresh old skills grown rusty with non-use, to create new ones and to key both old and new to job openings in local industry; and to see to it by this means that production would not be slowed down at any time, or at any place, by a lack of able workers.

MOBILIZING OUR MANPOWER

To accomplish the first of these objectives the Labor Division promptly set up a system for mapping out the present and future demands on the labor market as new defense contracts are awarded. Under the direction of Dr. Isador Lubin, executive assistant to Commissioner Hillman, in charge of labor requirements, these contracts are minutely analyzed by the Bureau of Labor Statistics to show what manpower will be called on to turn out the scheduled materials.

To date, analysis has disclosed that some 17 billion man-hours will be necessary to fill the orders so far authorized

by Congress for our Army and Navy plus those for Britain, China, and Greece.

To meet this challenge to America's ability to produce, a labor force sufficient in both numbers and aptitudes had to be mobilized more quickly than ever before. The magnitude of this task is perhaps best shown by the personnel problems facing aircraft and shipbuilding.

To fulfill existing commitments for the $2\frac{1}{2}$ billion dollars worth of Army and Navy planes and parts now on contract, the aircraft industry will need 455,000 workers for making frames, engines, and propellers by August 1941.

In February 1941 that industry had about 230,000 workers on its pay rolls. Hence, if it is to deliver on schedule, it must scour the labor market to hire an additional 225,000 workers within the next 6 months—225,000 additional bench-burrers, turret lathe operators, screw cutters, grinders, baffle-makers and the many others who are competent, or must be made competent, in the lengthy list of occupations required by the rapidly expanding aircraft industry.

Likewise, in shipbuilding, both in private and United States Navy shipyards, demand for labor is rising steadily from 126,900 workers in November 1940 to an estimated 388,000 in November 1942. And here, too, whether in the skilled group of calkers, electricians, machinists, or in the semi-skilled group of bolters-up, first, and stage builders, or in the unskilled group of helpers and laborers, qualified workers must be found.

To locate them—not only for aircraft and shipbuilding but a vast array of other industries—the Labor Division had naturally to do more than forecast labor requirements. It had also to discover what America had “on tap” in muscle and mind power to use the tools and guide the machines of defense.

At the request of the Labor Division, therefore, the United States Employment Service, through its 1,500 employment offices throughout the country, hastened its sur-

veys to classify more than 5,000,000 unemployed men and women according to trades and skills. This information indicated that there were approximately 1,000,000 workers who, on the basis of their work histories, were suited for skilled jobs. Another million and a quarter were semi-skilled. The remaining were divided among the professional, clerical, and unskilled categories. Employers have been using these lists to fill their personnel needs and thus to drain off the unemployed in their localities.

For example: Bob Sommerfrucht was just one of a Senior County, Utah, weed eradication project crew. Then along came the nationwide employment service survey of defense skills and an interviewer who was impressed with Sommerfrucht's background as a spot welder and metal worker.

The interviewer reported his findings to the State employment service and was told that there was a job for a top-notch welder at Fort Lewis, Wash.

“I got that job okay,” Sommerfrucht wrote back to a friend in Utah about 10 days later. “It's at Fort Lewis installing furnaces in barracks. The pay is the regular union scale. The work looks good for a year.” He had been earning \$49.40 a month eradicating weeds for the W. P. A.

Similarly, the Civil Service Commission made an inventory of its applications on file and, cooperating with the program of the Labor Division, it tapped the reservoir of older skilled workers by raising maximum age limits from 45 to 62 years in United States Army arsenals and United States Navy shipyards. Under the auspices of the Civil Service Commission, more than 250,000 civilian workers had been placed in all Army and Navy establishments up through February 15, 1941.

Labor unions also cooperated in this venture by appraising the abilities of both their employed and unemployed members. Many skills useful for defense industries have thus been “combed out” from behind store counters and filling-station pumps where they had been driven by the depression. As defense production expands, those workers will return to their former skilled occupations and be

replaced at their present posts by others whose experience is less valuable to defense projects.

Such skills have not only been "combed out" for registration purposes, but the labor unions have taken a large hand in mobilizing their workers at points where they are needed for specific defense undertakings. Especially valuable in this regard has been the aid given government agencies by William Green, head of the A. F. of L., and by unions affiliated with the Building and Construction Trades Department of the A. F. of L. of which John P. Coyne is president, which has furnished craftsmen for construction projects often located in remote sections of the country.

For example: Nearly 9,000 construction workers have traveled to an isolated part of Texas where they are now transforming a wilderness into the most modern naval air training station in the world.

The location chosen for this project, Corpus Christi on the Gulf of Mexico, was far from an adequate supply of skilled labor. Hence a large percentage of these workers had to be brought from places as distant as a thousand miles by the building trades unions of the A. F. of L.—a "mustering up" of skilled labor of many different kinds that was accomplished at no cost to the Government.

Averaging one man to an acre, the workers in July 1940 threw a fence around the 9,000-acre reservation, cleared the land of 10-foot high mesquite, and began erecting the main station, 3 base fields, and 35 outlying fields, together with scores of hangars, repair shops, barracks, and other buildings which make up this \$30,000,000 project.

The unions not only assisted the Government in providing sufficient skilled labor for this tremendous undertaking, but also pledged that there would be no strikes on the job. As a result not a single hour has been lost through stoppages. Besides, the workers have carried on at Corpus Christi at considerable personal sacrifice. They have not only had to journey many miles to reach the project but also, once arrived on the site itself, they have been compelled to live under primitive housing conditions—in tents, and trailer camps, and shacks, all hastily contrived. Similarly, those who have been able to rent quarters in private homes "in town" are crowded together, with seven to ten men sleeping in bedrooms built for two. Others have had to commute a hundred miles a day from temporary shelters in farmhouses.

Despite all these handicaps, the Navy Department is confident that

the Corpus Christi training station will be completed 6 weeks ahead of schedule, and that by the middle of summer, 1941, it will begin turning out junior officers at the rate of 300 a month.

The contribution of America's working people to the nation's defense has not been confined solely to providing manpower for industry's needs. Calling upon their intimate grasp of industrial techniques, and human resources, they have also lent their aid to management in streamlining production methods. The leaders of organized labor have presented detailed plans to industry and to government showing how men and machines could be better coordinated to speed defense.

For example: Philip Murray, president of the C. I. O., submitted to President Roosevelt the so-called "Reuther plan" to turn out 500 planes a day by harnessing the idle equipment and idle manpower of the automotive industry for the mass production of aircraft. The plan was devised by Walter Reuther, an official of the United Automobile Workers, under the direction of the union's president, R. J. Thomas.

In drafting this proposal, Mr. Reuther drew upon the first-hand knowledge of some of the industry's ace technicians, members of the union, who conducted an exhaustive inquiry into this question.

Under the impetus of the defense program, the clearance system of the United States Employment Service, which had only been used rarely in the past, was reexamined and streamlined. New "interlocking" methods were devised to transfer workers from areas where job opportunities were lacking to sections where the demand on the labor market could not be met from local sources.

By means of this arrangement, employers call on their local Employment Service Office for defense workers. If these are not available within the township or city, the state office of the Employment Service makes a quick round-up of all offices in the State to discover where the requested labor can most easily be obtained. If a sufficient number of workers of the skills asked for cannot be found within a single State, then a regional search is begun and the quest is extended until the need is met.

To facilitate this clearance system, the Employment Service offices secure constant and comprehensive data concerning current developments in the labor market. In conjunction with other government agencies, the Employment Service has established a list of some 400 "basic" occupations essential to defense. It compiles and collates information about these "basic" occupations at monthly intervals for each locality throughout the nation.

During the past 8 months, this kind of information has proved to be extremely valuable, not only to employers but also to various Government agencies, often guiding the latter in allocating defense contracts to areas where a sufficient supply of labor is available, in planning for the recruitment and housing of defense workers, and in keeping in close touch with changes and conditions in the labor market on both a local and national scale.

The Employment Service also regularly appeals over the radio and through the press to all workers urging them to check with their local Public Employment Office before leaving town for a prospective job. In this way labor migration, such a serious handicap in 1917-18, has been cut to a tremendous extent.

SCHOOLS FOR DEFENSE WORKERS

Yet even after manpower requirements have been calculated, and audits made of available workers, the road toward a labor supply adequate for defense needs was only half-traveled. In this day of increasing mechanization and new production techniques, United States labor has to be more competent perhaps than ever before.

Fortunately, a great deal of that competence was instantly available—in construction, in steel, in electrical and automotive equipment, and in many other spheres. At the same time, however, a great deal of that competence had to be fostered in varying degrees—from the expert craftsman who needed a "brush-up" study to master

new more complex blueprints, to the "green" worker who couldn't tell a lathe from a lather.

Hence the Labor Division launched a Nation-wide training program divided into two sections. The first was designed to improve and refresh the hand-and-eye facility of American workers by means of special instruction in the country's public vocational schools. The second was designed to train workers "on the job," to enable them to make fullest use of their highest skill. The purpose animating this dual program has been and remains to anticipate and thus to avert any potential or actual shortages in qualified labor for the myriad defense undertakings now under way.

At all times, however, the greatest vigilance is exercised to safeguard the skills and employment opportunities of labor already equipped for defense work, and to avoid duplication and surplusage in the training effort. Only in cases where skilled workers cannot be obtained, and then only after an exhaustive search for them has proven fruitless, are these training procedures brought into play.

In the field of defense labor supply and training the Labor Division has acted as a clearing house for the seven Government agencies engaged in this endeavor, namely:

- United States Office of Education.
- The Work Projects Administration.
- The United States Civil Service Commission.
- The Federal Committee on Apprenticeship.
- The Public Employment Service of the Bureau of Employment Security.
- The National Youth Administration.
- The Civilian Conservation Corps.

To integrate these agencies into a comprehensive program, the Labor Division borrowed the services of Floyd W. Reeves, authority on labor supply, from the American Youth Commission of which he is the director.

On June 27, 1940, Congress, at the request of the Labor

Division, appropriated \$15,000,000 to the United States Office of Education for inaugurating a defense training program in the vocational schools of the Nation. Forty-seven States, the District of Columbia, Hawaii, and Puerto Rico, threw open their schools during the summer of 1940 and adopted the twofold technique of setting up:

1. Training courses for unemployed workers referred by the W. P. A. or by local Public Employment Service Offices to improve and "polish up" rusty skills.

2. Training courses to prepare employed workers recommended by management and labor union groups for upgrading in defense industries.

These vocational training programs are fashioned in consultation with a local advisory committee composed equally of representatives of management and labor.

Both phases of this undertaking were started on July 1, 1940. By the end of December 1940, a total of 335,000 had been enrolled—192,000 in preemployment refresher classes and 143,000 in the supplementary courses, with a total of 639 cities offering the former instruction and 416 cities offering the latter. Thus in the first 6 months, 10 times as many workers were trained as during the entire period of the first World War.

For example: In Paterson, N. J., the head of the public vocational school and a representative of the Wright Aeronautical Co. together drew up plans for a preemployment course, keying it to jobs which were opening up in the plane engine plant.

The course lasts 4 weeks. One week is spent on blueprint reading, shop mathematics, use of measuring instruments, etc., and 3 weeks on shop methods performing specific operations similar to those on which the worker will be engaged in the plant if he satisfactorily completes the course. The company furnishes some of the machine tools and a few of the special instructors.

During the first 8 months of operation, over 1,700 new employees were sifted through this 4-week course and taken into the Wright plant. All but less than 100 are still there, a great many having been moved up the scale of job levels several times.

On October 9, 1940, Congress appropriated an additional \$60,500,000 to continue the programs already initiated and

to extend the benefits of defense training to additional groups. Of this, \$26,000,000 was allotted to carry on the program started during the summer; \$8,000,000 was authorized for equipment; \$9,000,000 was allocated for short engineering courses of college grade to train engineers and supervisors, 100,000 of whom will have benefited from this schooling by June 1941; \$10,000,000 for special vocational courses for out-of-school rural and nonrural youth; and the remaining \$7,500,000 was provided for training young people employed on metal, mechanical, and manual work projects of the National Youth Administration.

The bill, approved on June 27, 1940, also authorized the Work Projects Administration to pay W. P. A. workers their regular wages for time spent in national defense training courses. The W. P. A. contributed \$9,781,340 for this purpose, and the United States Office of Education, which provides the necessary instruction, contributed \$7,500,000. From July 1 to December 31, 1940, a total of 53,300 different W. P. A. trainees had been enrolled in these preemployment refresher courses conducted by local vocational schools, and to maintain this activity for the remainder of the year, the W. P. A. allocated an additional \$17,821,680.

The Labor Division also officially initiated a second W. P. A. project to train approximately 5,750 persons in the varied occupations of aviation ground service men, thus furnishing preliminary training for aviation mechanics crucial to the defense program.

Cosponsors of this project are the Civil Aeronautics Administration and the United States Office of Education. The W. P. A. has allocated \$1,429,690 for carrying out this work.

Moreover, the appropriation bill of October 9, 1940, included a fund of \$30,535,375 to enlarge the employment of the National Youth Administration under which jobless young people between the ages of 17 to 24 are getting work-experience in about 4,000 "N. Y. A." shops through-

out the country. This additional amount has increased the number of young people employed by the N. Y. A. on its out-of-school projects from around 250,000 in September to almost 400,000 on December 28, 1940.

Moreover, approximately 300,000 enrollees in the Civilian Conservation Corps are acquiring good habits of work. Many are receiving basic instruction in specialized non-combat skills which are being keyed closely to later defense jobs.

Similarly, in line with its emphasis upon developing our human resources for their most effective contribution to the defense program, the Labor Division requested and Congress appropriated \$120,000 in the bill of June 27, and another \$225,000 on October 9 to expand the services of the Federal Committee on Apprenticeship in the Department of Labor.

In dovetailing the many different phases of this whole defense training program, the 1,500 Public Employment Offices scattered throughout the country serve as a two-way funnel. In the first place, they analyze the qualifications of applicants and refer them to the proper training courses. In the second place, the Employment Offices seek to connect trainees with positions in defense industries for which they have been equipped.

In addition, the Employment Offices assist the vocational schools in adapting their instruction to the actual requirements of employers who have received defense orders. Moreover, local Employment Office agents every month visit employers in selected defense industries to obtain information relating to their anticipated labor requirements for the ensuing 60 days. As a result of this careful coordination, trainees are moved from classroom and shop directly into specific jobs for which they have been fitted.

For example: Reports show that 8,000 out of the 10,000 preemployment refresher trainees in the State of Illinois have been placed in industrial jobs.

In this respect, a recent Nation-wide check-up of known

placements of defense trainees showed that some 75 percent had landed jobs in which they were consistently using the training they had received.

"ON-THE-JOB" TRAINING

Linked with both the Employment Service and vocational instruction in the schools is "on-the-job" training which is vital to success in the task of maintaining a steady flow of competent labor into defense channels.

The special significance of this type of training is that it fills a gap left over from the depression years when industry as a whole had relied on the vast pool of unemployed to meet their limited demand for additional skilled workers and had discontinued their normal apprenticeship and upgrading programs. The defense emergency, therefore, found many companies with no training facilities and little or no knowledge of how to set them up.

The vocational education program could do part of the task of training. But it has long been recognized that the most effective training is that which a man receives actually on the job.

In addition, it takes 3 or 4 years to train all-around skilled workers in some trades. The national emergency demanded that short cuts be found and used. For instance enough lens grinders were available to take care of the industry's needs in normal times. But the defense program has enlarged the demand for such workers way beyond the point where it could be satisfied under prevailing training arrangements. Hence, either defense work had to be halted for several years or new methods had to be devised.

The first alternative was out of the question. Thus, after many conferences with top-ranking industrialists and labor leaders throughout the country, the Labor Division evolved a detailed plan to render manufacturers the following four types of assistance:

- (1) To help in the analysis of training needs.
- (2) To aid in setting up a program in each defense plant to meet these needs.
- (3) To establish a clearing house system which would keep industrialists informed about the experience of other plants throughout the country facing similar problems.
- (4) To familiarize plant management with the services of government agencies operating in the field of employment and training.

Under training-within-industry methods set up by the Labor Division, the length of time for doing highly involved and delicate operations in defense industries has been considerably cut down.

This has been accomplished by applying a process of grading employees in progression up through jobs of higher skills within defense plants. Of equal significance are the training of all-round skilled workers through well-planned apprenticeship and the development of supervisory personnel. This program is under the direction of Channing Dooley, one of the country's foremost personnel authorities, who was borrowed for this work from the Socny-Vacuum Corporation. Mr. Dooley is assisted by Walter Dietz of Western Electric, William Conover of United States Steel and M. J. Kane of American Telephone & Telegraph.

They are assisted by a committee of six advisers in this field from organized labor and six from management, as follows: E. C. Davison, International Association of Machinists; Clinton Golden, Steel Workers Organizing Committee; John Green, Industrial Union of Marine and Shipbuilding Workers of America; Marion Hedges, International Brotherhood of Electrical Workers; Walter Reuther, United Automobile Workers of America; John E. Fooney, Operative Plasterers' and Cement Finishers' International Association; M. S. Burke, United Aircraft Corporation; C. S. Ching, United States Rubber Co.; Randall R. Irwin, Lockheed Aircraft Corporation; W. G.

Marshall, Westinghouse Electric & Manufacturing Co.; K. F. Ode, Falk Corporation; and E. J. Robeson, Newport News Shipbuilding & Dry Dock Co.

It is through this "on-the-job" training—conducted by individual concerns, within their own plants, and at their own expense—that the Labor Division has helped industry to overcome many of the difficulties involved in fashioning a skilled labor force, factory by factory, in all parts of the country.

The procedures for the upgrading system, perfected by T. W. I. (training within industry), have been drawn up and adopted unanimously by representatives of labor and industry. Spot checks in plants throughout the country have shown its efficacy and the Labor Division is now promoting the program on a nation-wide basis.

For example: Flooded with orders from the Army Air Corps for its liquid-cooled plane motors, and faced with the problem of a sudden and tremendous expansion of personnel, the Allison Division of General Motors used this type of upgrading plan for training new workers in its Indianapolis plant.

Officials of the plant affirm that this method has enabled them to enlarge their working force without difficulty from 1,200 to 7,500 in recent months, despite the fact that nearly one-third of the new employees were completely green. Some of these men, they declare, who had handled nothing more complicated than a wheelbarrow before going to work at the plant, have been moved up, rung by rung on the ladder of skills until they are now performing highly technical operations on the final assembly line. This is what a T. W. I. program, if properly handled, can do.

To expedite this whole undertaking, the country has been divided into 22 districts, with a headquarters office in each under the supervision of a T. W. I. representative. District representatives have already been chosen for 18 of these production areas after many consultations with all groups involved. They are experts in this field who have been approved jointly by labor unions and by management and are serving in their new capacity without pay.

Each representative will be assisted by four advisers—one from the A. F. of L., one from the C. I. O. and two

from industrial management. In addition, he will have the assistance of a panel of 10 or more personnel and training consultants borrowed from industry and available to help defense plants install training programs. When the schedule gets into full operation, there will be from 300 to 400 such aides on call.

The 22 districts, the headquarters in each, and those representatives so far picked are as follows:

District	Headquarters	Representative
Upper New England-----	Boston, Mass-----	Clarence G. McDavitt.
Lower New England-----	Hartford, Conn-----	Ernest A. Stowell.
Upstate New York-----	(not picked)-----	(pending).
Greater New York City-----	New York, N. Y-----	D. J. Hoose.
New Jersey-----	Newark, N. J-----	Glenn L. Gardiner.
Eastern Pennsylvania and Delaware-----	Philadelphia, Pa-----	(pending).
Maryland-----	Baltimore, Md-----	Do.
Virginia, North Carolina, and South Carolina-----	Canton, N. C-----	George G. Arthur.
Southeastern district (Georgia, Alabama, Florida, Mississippi, and Eastern Tennessee)-----	Atlanta, Ga-----	J. E. McDaniel.
Ohio Valley District (Southern Ohio, Kentucky, and Southern West Virginia)-----	Cincinnati, Ohio-----	Paul Mooney.
Western Pennsylvania and Northern West Virginia-----	Pittsburgh, Pa-----	C. S. Coler.
Northern Ohio, and Erie County, Pennsylvania-----	Cleveland, Ohio-----	Oscar Grothe.
Michigan-----	Detroit, Mich-----	M. M. Olander.
Indiana (except Lake and Porter Counties)-----	Indianapolis, Ind-----	C. R. Evans.
Illinois; Milwaukee County, Wisconsin; Lake and Porter Counties, Indiana-----	Chicago, Ill-----	Paul A. Mertz.
North Central States (Minnesota, North Dakota, South Dakota, Nebraska, Iowa, and Wisconsin—except Milwaukee County)-----	St. Paul, Minn-----	Ernest L. Olrich.
Missouri, Kansas, Oklahoma, Arkansas, and Western Tennessee-----	St. Louis, Mo-----	A. Earl Wyatt.
Texas and Louisiana-----	Houston, Tex-----	(pending).
Colorado and Wyoming-----	Denver, Colo-----	George Kirk.
Southern California, Arizona, and New Mexico-----	Los Angeles, Calif-----	William K. Hopkins.
Northern California, Nevada, and Utah-----	San Francisco, Calif-----	Alexander R. Heron.
Pacific Northwest (Washington, Oregon, Montana, and Idaho)-----	Seattle, Wash-----	H. G. Winsor.

After research and study in the field to obtain first-hand information and many meetings in Washington with labor and management representatives of specific defense industries, the T. W. I. Section of the Labor Division evolved the technique of this training program and made it available to industry through a series of training bulletins under the following headings:

The T. W. I. program.

Upgrading within industry.

Expediting production through training.

How to prepare instructors to give intensive instruction.

Expediting the training of skilled tradesmen.

Strengthening the managerial organization.

Expanding the managerial organization.

Improving supervision.

Helping the experienced worker to "break in" a new man.

Thousands of these bulletins have been sent out to manufacturers and to representatives of organized labor through T. W. I. district offices and such governmental agencies as the Employment Service, the Federal Committee on Apprenticeship and the United States Office of Education.

This material is also being integrated into the training policy of Army arsenals, Navy yards, and other government branches carrying on work comparable to that of private industry. Hence both military and other defense agencies, together with industry itself, are finding this T. W. I. technique of great value in the current emergency.

And among the important byproducts of this "on-the-job" program, as with other activities of the Labor Division, is the growing sense of mutual understanding and collaboration between management and labor deriving from their close association in this enterprise.

HOUSING FOR DEFENSE WORKERS

Coincident with making an inventory of our manpower and setting up training programs to adapt that manpower to high regular output of defense materials, the Labor Division tackled the question of assuring adequate housing for defense workers. The migration of thousands of employees from one community to another to meet the labor needs of defense production tends to create shelter shortages which, if not prepared against in advance, would become acute in some places. It is widely recognized that lack of proper housing induces bad sanitary conditions, overcrowding, and impairs the morale and efficiency of the worker.

As an outgrowth of its labor requirements program, the Labor Division has instituted studies of defense contracts to determine in advance when, where, and how many houses should be constructed to care for defense workers. This has in turn required constant surveys of the labor supply available to fill the needs of plants in scores of communities, calculations of the number of new workers that would have to be brought in from outside, examination of the current housing situation, including rentals, along with estimates of the number of dwelling units that would have to be constructed.

For example: At the request of the Labor Division, the Bureau of Employment Security and the Bureau of Labor Statistics surveyed the housing situation in New Britain, Conn., and the number of workers who would have to be brought into the city to satisfy the demands of defense manufacturing.

These surveys showed that contracts to be executed by the city's plants called for more workers than were available locally and that there were practically no housing vacancies.

As a result, the Labor Division requested the building of 300 additional dwelling units to rent from \$25 to \$35 a month. Within 45 days of the original request for a survey, the blueprints for this new construction had already been drawn.

Surveys of this kind have been conducted—or are in process—in nearly 100 different cities in 35 States.

THE ADVISORY COMMISSION TO THE COUNCIL OF NATIONAL DEFENSE
FEDERAL RESERVE BUILDING
WASHINGTON, D. C.

March 4, 1941

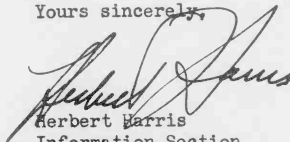
Dear Librarian:

We are enclosing herewith a copy of the pamphlet entitled "Labor Speeds Defense" just released by the Labor Division of the National Defense Advisory Commission.

Because of the many inquiries throughout the country concerning the measures which are being taken to mobilize the nation's manpower for defense production and labor's role in the defense program, we feel that this publication could serve a valuable purpose in your community. In it you will find answers to questions relating to labor training, reemployment, industrial relations, and similar topics. May we therefore ask that this pamphlet be listed in your files and displayed in your pamphlet collections.

We would appreciate having from you any suggestions or comments you may care to make. If you wish additional copies kindly communicate directly with us.

Yours sincerely,



Herbert Harris
Information Section
Labor Division
National Defense Advisory Commission

Enclosure

PICKING SITES FOR NEW PLANTS

To head off any unnecessary migration of labor and the consequent cost of providing new housing, sanitation, school and hospital facilities, the Labor Division has lent its aid in the selection of sites for new defense plants. In many cases it has made it possible for the War and Navy Departments to change the proposed location of these plants from communities where labor would have to be imported from the outside to those where sufficient unemployed, skilled in the occupations needed, were available within easy commuting distance.

For example: The War Department planned to locate a large shell-loading plant in a city in a mid-central State. On investigation, the Labor Division learned that there was no housing to care for the additional workers needed to operate the plant after its construction. Skilled workers, the inquiry revealed, would have to travel a total of between 120 and 140 miles every day. As a result of the Division's survey, the plant was constructed in a community where workers were available within normal traveling distance.

In the course of this work, the Labor Division has collected detailed information on labor supply relating to the location of approximately 150 new plants or plant expansions recommended by the War or Navy Departments. As a result of the Division's findings, the sites have been chosen so that the unemployed will be put to work with a minimum of disturbance to social relationships within the community.

DEFENSE ORDERS FOR SMALL BUSINESS

To quicken defense production, to bring economic aid to the "ghost towns" of America and to ease the difficulties of readjustment when the emergency is over, the Labor Division sponsored a system of "farming out" defense orders among the thousands of smaller shops throughout the nation.

The first step in the defense program, of course, was the award of billions of dollars of contracts by the Army and Navy to the prime producers of the nation. It was soon

realized, however, that the production problem was so vast and so complex that it could not be properly handled by these prime contractors alone. They had neither sufficient labor nor sufficient equipment to turn out the necessary materials in time.

To allow these large concerns to produce by themselves all the goods called for under defense contracts would have necessitated the mass migration of hundreds of thousands of workers from small communities into the great industrial centers where housing facilities would have to be erected for them and where they would run the risk of being "stranded" after the defense program came to an end. This procedure would also have called for a mammoth additional construction and manufacturing program to build new plants and new machines—equipment which would not be ready to operate for another year or 18 months.

Quick reconnaissance surveys undertaken by the Labor Division under the direction of Morris L. Cooke, management engineer attached to its staff, uncovered the fact that a high percentage of the Nation's productive capacity was lying dormant in smaller cities and towns throughout the country. They also showed that declining industries and technological improvements had reduced to idleness not only tools and machines, but also a vast reservoir of skilled hands ready and willing to use them.

The "farming out" techniques now being used by England and Germany to speed production as well as those used by this country during the last war were therefore studied in detail. It was found that the secret of the rapid increase in plane production in Great Britain has been its "bits and pieces" methodology under which thousands of small shops, hitherto unused, are now busy 24 hours a day making parts. It was also recalled that in this country during the last war, the Hog Island shipyard near Philadelphia was able to turn out two ships a week by splitting up the manufacture of parts among 2,300 plants

located as far west as the Mississippi and as far north as Toronto.

"Test checks" by trained engineers on the staff of the Labor Division resulted, to cite a single instance, in the mailing out of a list of partly idle plants in 15 cities in the Ohio River region to 500 firms holding Government contracts. These facilities ranged from older foundries and a rolling mill to railroad repair shops. In all cases skilled workers were available.

A program of stimulating local communities to assess their idle resources in men and machines has been likewise launched by the Labor Division. Community groups of this character are urged to organize, and are advised to "pool" their facilities and to solicit orders—as subcontractors—from the large firms having defense awards.

For example: A survey conducted by the Shenandoah Valley Defense Council, composed of representatives of three counties in Virginia, showed that there were a total of 365 machine tools available in this predominantly rural area for defense work. These tools were idle 90 percent of the time and could be used on subcontracting work for the Army and Navy.

The survey also disclosed that there was plenty of experienced, skilled labor ready to operate these machines. The men were not willing to leave the area to obtain defense work in the big cities because, when not employed, they went back to the farm until local plants needed them again.

The facilities were pooled and the local defense council proceeded to solicit orders to bring its equipment into the rearmament program.

Already several such pools are in operation. Each pool, functioning on a nonprofit basis, acts as sole agent for the community's equipment and manpower, dividing up the work among the various local units in accord with their respective ability to produce.

STABILIZING SHIPBUILDING

To facilitate the most efficient production of vessels blueprinted for defense needs, Commissioner Hillman on November 27 appointed the Shipbuilding Stabilization

Committee composed of representatives of organized labor, shipbuilding employers, the Navy and the Maritime Commission. Morris L. Cooke of Mr. Hillman's staff was named as chairman.

The committee has undertaken detailed investigations of wage rates and working conditions, with particular emphasis upon the migration of workers from yard to yard and its effect upon production. These inquiries are being made on a regional basis, whole shipyard zones being considered as separate entities. The results will form the basis of recommendations for a labor program that will best insure speedy and smooth construction of ships for national defense.

As a step in this direction, the committee, at its first meeting on December 5 approved a policy urging that there should be no interruption of production on the part of shipyard employers and of shipyard employees before all facilities at the disposal of the National Defense Advisory Commission for adjusting differences have been exhausted.

GOVERNMENT AGENCIES LEND A HAND

A major item in this report is the part being played in the defense program by the agencies of government which have been set up since the last war and particularly since 1933 in the field of labor and social legislation. Without such administrative agencies and the laws they are enforcing the task of the Labor Division would have been rendered infinitely more difficult and the progress of the defense program immeasurably slowed.

LABOR POLICY FOR DEFENSE

On May 26, 1940, President Roosevelt reaffirmed the belief that these measures have been an aid, not only in speeding defense, but also in strengthening the faith of the people in free government. He then said:

For that reason, we must make sure, in all that we do, that there be no breakdown or cancellation of any of the great social gains

which we have made in these past years. We have carried on an offensive on a broad front against social and economic inequalities and abuses which had made our society weak. That offensive should not now be broken down by the pincers movement of those who would use the present needs of physical military defense to destroy it.

In accord with this declaration of the President, the Labor Policy Advisory Committee drew up a statement of labor policy which was submitted by Mr. Hillman to the National Defense Advisory Commission. On September 1 the Commission unanimously adopted this policy and made it public. It said, in part:

All work carried on as a part of the defense program should comply with Federal statutory provisions effecting labor wherever such provisions are applicable. This applies to the Walsh-Healey Act, Fair Labor Standards Act, the National Labor Relations Act, etc. There should also be compliance with State and local statutes affecting labor relations, hours of work, wages, workmen's compensation, safety, sanitation, etc.

The Commission also reaffirmed the principles enunciated by the Chief of Ordnance of the United States Army during the World War in his order of November 15, 1917, relating to the connection between labor standards and efficient production. The order stated in part:

In view of the urgent necessity for a prompt increase in the volume of production * * *, vigilance is demanded of all those in any way associated with industry lest the safeguards with which the people of this country have sought to protect labor should be unwisely and unnecessarily broken down. It is a fair assumption that for the most part these safeguards are the mechanisms of efficiency. Industrial history proves that reasonable hours, fair working conditions and a proper wage scale are essential to high production. * * * Every attempt should be made to conserve in every way possible all of our achievements in the way of social betterment. But the pressing argument for maintaining industrial safeguards in the present emergency is that they actually contribute to efficiency.

In the belief that this statement of labor policy by the Commission was of national importance, the President

included its text in a special message to Congress on September 13.

DEFENSE CONTRACTS

The system of negotiated contracts inaugurated at the request of the Commission in place of competitive bidding has been helpful in implementing this labor policy.

On the subject of contracts, the following statement of principles contained in Procurement Circular No. 43 was issued in December 1940 by the Adjutant General's office of the War Department:

In future, every invitation for bids pertaining to national defense contracts will include this statement:

"The general principles governing the letting of national defense contracts and the statements of labor policy adopted by the advisory commission to the council of national defense and approved by the President will be the guide in the award of contracts under this invitation for bids * * * All work executed under any such contract * * * will be carried out in compliance with the provisions of the statement of labor policy relative to overtime pay and in compliance with Federal statutory provisions affecting labor wherever such provisions are applicable, as well as with State and local statutes affecting labor relations, hours of work, wages, workmen's compensation, safety, and sanitation."

The Navy Department has adopted a similar procedure.

The labor policy statement of the Commission also declared: "Workers should not be discriminated against because of age, sex, race, or color." In this connection, as previously noted, the Labor Division has achieved considerable success in lifting the ban against the older worker, thus tapping a large reservoir of able men and women whose skills have been of great value to defense production.

Likewise, legal provisions have been made, and administrative action taken, to establish a policy of no discrimination on account of race or color in defense training, and to furnish a basis upon which equitable participa-

tion by Negroes in vocational education for defense can be built.

The Labor Division appealed to the A. F. of L. and the C. I. O. to cooperate in carrying out its non-discrimination credo in employment for defense industries. Both organizations pledged their active support to this undertaking. As a result, hundreds of Negro skilled workers are now employed on army construction projects in the South, and elsewhere throughout the country. In several instances, this represents the opening of new job opportunities for colored craftsmen.

For example: Colored skilled labor is currently employed on army construction work at Fort Meade, Md.; United States Army Hospital in New Orleans, La.; Fort Joseph T. Robinson, Ark.; Camp Riley, Kans.; Fort Knox, Ky.; Fort Wheeler, Ga.; Fort Jackson, S. C.; Fort Blanding, Fla.; Camp Monroe, Va.; Camp Peay, Tenn.; and Fort Bragg, N. C.

OUR NATIONAL MORALE

Underlying this labor policy is the recognition by all that the morale of our people is a defense asset at least as vital and significant as guns, tanks, and planes.

The morale of the American people is based primarily on a way of doing things. Teamwork is its mainspring. Voluntary cooperation is its keynote. It has to do, that morale, with the individual's own sense of his worth, his dignity, his independence—his right to have a voice and vote in the conduct of his affairs.

The essence of Americanism is to have a hand in determining our ways of work and life. This in turn brings with it the responsibility of self-discipline. And the self-discipline of a free and independent people will always enable them to out-think, out-produce, and out-live any system of totalitarian slavery.

APPENDIX

This appendix contains two tables of strike statistics and the complete text of the labor policy adopted unanimously by The National Defense Advisory Commission

APPENDIX A

The following statement of labor policy was unanimously adopted September 1, 1940, by the National Defense Advisory Commission:

Primary among the objectives of the Advisory Commission to the Council of National Defense is the increase in production of materials required by our armed forces and the assurance of adequate future supply of such materials with the least possible disturbance to production of supplies for the civilian population. The scope of our present program entails bringing into production many of our unused resources of agriculture, manufacturing, and manpower.

This program can be used in the public interest as a vehicle to reduce unemployment and otherwise strengthen the human fiber of our nation. In the selection of plant locations for new production, in the interest of national defense, great weight must be given to this factor.

In order that surplus and unemployed labor may be absorbed in the defense program, all reasonable efforts should be made to avoid hours in excess of 40 per week. However, in emergencies or where the needs of the national defense cannot otherwise be met, exceptions to this standard should be permitted. When the requirements of the defense program make it necessary to work in excess of these hours, or where work is required on Saturdays, Sundays, or holidays, overtime should be paid in accordance with the local recognized practices.

All work carried on as part of the defense program should comply with Federal statutory provisions affecting labor wherever such provisions are applicable. This applies to the Walsh-Healey Act, Fair Labor Standards Act, the National Labor Relations Act, etc. There should also be compliance with State and local statutes affecting labor

relations, hours of work, wages, workmen's compensation, safety, sanitation, etc.

Adequate provision should be made for the health and safety of employees.

As far as possible, the local employment or other agencies designated by the United States Employment Service should be utilized.

Workers should not be discriminated against because of age, sex, race, or color.

Adequate housing facilities should be made available for employees.

The Commission reaffirms the principles enunciated by the Chief of Ordnance of the United States Army, during the World War, in his order of November 15, 1917, relative to the relation of labor standards to efficient production:

In view of the urgent necessity for a prompt increase in the volume of production * * *, vigilance is demanded of all those in any way associated with industry lest the safeguards with which the people of this country have sought to protect labor should be unwisely and unnecessarily broken down. It is a fair assumption that for the most part these safeguards are the mechanisms of efficiency. Industrial history proves that reasonable hours, fair working conditions, and a proper wage scale are essential to high production. * * * Every attempt should be made to conserve in every way possible all of our achievements in the way of social betterment. But the pressing argument for maintaining industrial safeguards in the present emergency is that they actually contribute to efficiency.

APPENDIX B

TABLE A

Strikes in the United States, 1914 to 1940

Year	Number of—			Index (1927-29=100)		
	Strikes	Workers involved	Man-days idle	Strikes	Workers involved	Man-days idle
1914.....	1,204	(¹)	(¹)	162	(¹)	(¹)
1915.....	1,593	(¹)	(¹)	214	(¹)	(¹)
1916.....	3,789	1,599,917	(¹)	509	514	(¹)
1917.....	4,450	1,227,254	(¹)	598	395	(¹)
1918.....	3,353	1,239,989	(¹)	451	399	(¹)
1919.....	3,630	4,160,348	(¹)	488	1,337	(¹)
1920.....	3,411	1,463,054	(¹)	458	470	(¹)
1921.....	2,385	1,099,247	(¹)	321	353	(¹)
1922.....	1,112	1,612,562	(¹)	149	519	(¹)
1923.....	1,553	756,584	(¹)	209	243	(¹)
1924.....	1,249	654,641	(¹)	168	210	(¹)
1925.....	1,301	428,416	(¹)	175	138	(¹)
1926.....	1,035	329,592	(¹)	139	106	(¹)
1927.....	707	329,939	26,218,628	95	106	178
1928.....	604	314,210	12,631,863	81	101	86
1929.....	921	288,572	5,351,540	124	93	36
1930.....	637	182,975	3,316,508	86	59	23
1931.....	810	341,817	6,893,244	109	110	47
1932.....	841	324,210	10,502,033	113	104	71
1933.....	1,695	1,168,272	16,872,128	228	376	115
1934.....	1,856	1,466,695	19,591,949	250	472	133
1935.....	2,014	1,117,213	15,456,337	271	359	105
1936.....	2,172	788,648	13,901,956	292	254	94
1937.....	4,740	1,860,621	28,424,857	637	598	193
1938.....	2,772	688,376	9,148,273	373	221	62
1939.....	2,613	1,170,962	17,812,219	351	377	121
1940.....	2,450	577,000	6,500,000	(¹)	(¹)	(¹)

Source: U. S. Bureau of Labor Statistics.

¹No information available.

TABLE B

Man-days of idleness during strikes in 11 industries closely related to national defense compared with man-days worked, 1940¹

Industry	Minimum number of man-days worked	Man-days idle as a percentage of man-days worked	Number of man-days worked per man-day idle
		<i>Percent</i>	
Aircraft.....	21,624,000	0.17	594
Aluminum.....	6,792,000	.45	222
Automobiles.....	107,424,000	.10	1,031
Blast furnaces, steel works, and rolling mills.....	116,088,000	.12	849
Electrical machinery.....	57,624,000	.68	146
Engine manufacturing.....	12,528,000	.06	1,685
Explosives.....	1,824,000	.16	601
Foundries and machine shops.....	96,624,000	.27	375
Machin e tools.....	1,584,000	.05	1,822
Sawmills, logging camps and millwork..... ²	110,352,000	.39	254
Shipbuilding.....	22,488,000	.21	466

Source: U. S. Bureau of Labor Statistics.

¹ Days work estimated as average employment times 240 days per year.

² With allowance for independent logging camps which are included in the strike data but are excluded from the regularly published employment figures.

**END OF
TITLE**